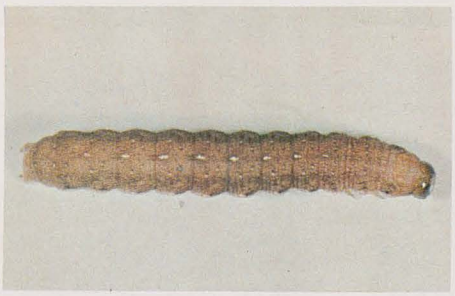
COMMON FORAGE LEGUME INSECTS

For safe and effective use of insecticides, always identify the problem correctly.

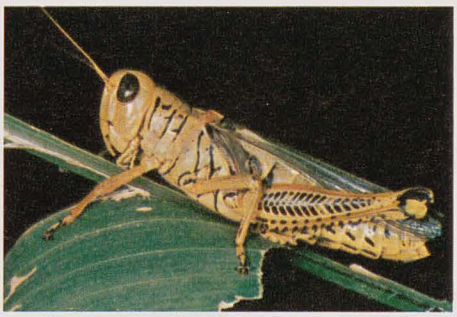
1. Alfalfa weevil adult, and larvae and damage

2. Clover leaf weevil larva

3. Sweet clover weevil and typical damage

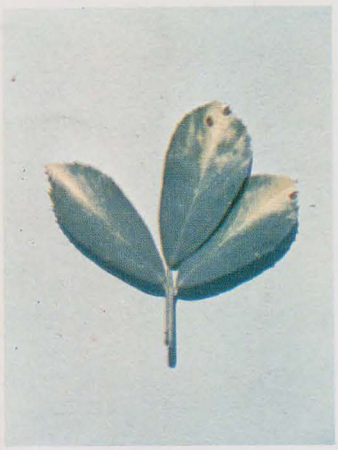


4. Varigated cutworm



5. Grasshopper

6. Green clover worm



7. Potato leafhopper (greatly enlarged) and leafhopper damage to alfalfa

8. Meadow spittlebug and nymphs

9. Spotted alfalfa aphid

10. Pea aphid

Prepared by Extension Entomologists of the North Central States in cooperation with the Federal Extension Service, U.S. Department of Agriculture

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1. **ALFALFA WEEVIL,** *Hypera postica* (Gyllenhal). The principal damage is done by the larvae which feed on the foliage. Heavy feeding gives infested fields a gray, frosted appearance. Overwintering adults lay eggs inside the stems early in the spring. In southern states some eggs may be deposited in late fall. Larvae are pale yellow to green with a distinct white stripe down the middle of the back and a shiny black head. Most severe damage is to the first growth in the spring and to early regrowth of the second cutting. Alfalfa is the principal host plant.

2. **CLOVER LEAF WEEVIL LARVA,** *Hypera punctata* (Fab.). These larvae are quite similar to the larvae of alfalfa weevils except their heads are tan or brown, not black, and they are larger. They feed on alfalfa and the clovers, but seldom become numerous enough to cause economic losses. Natural control factors usually keep their numbers low.

3. **SWEET CLOVER WEEVIL,** *Sitona cylindricollis* (Fahraeus). This insect is the most important hazard to sweet clover production. The damage, done by the adults, is very distinctive. Regular, crescent-shaped notches are chewed from the edges of the leaflets. Weevils begin feeding early in the spring and are especially destructive to seedlings. This often results in severe stand reduction.

4. **VARIEGATED CUTWORM,** *Peridroma saucia* (Hubner). The distinctive features of this cutworm are the light yellow, diamond-shaped spots aligned in a row down the middle of the back. The overall color of the worms may range from almost black to light greenish yellow or tan. This species of cutworm usually becomes most abundant during warm, wet seasons. Unlike many other species, the variegated cutworm will produce several generations per year. When present in large numbers they frequently feed on the regrowth which follows cutting of the forage crop. This may delay the next crop and keep heavily infested parts of fields black. If an infested forage crop is windrowed, the worms may be found under the windrows.

5. **GRASSHOPPERS,** various species. Pictured is the differential grasshopper, *Melanoplus differentialis* (Thomas). These common pests become most numerous in uncultivated areas. Consequently, the heaviest infestations are usually encountered in field margins, fence rows, idle land, pasture, and untilled fields of certain forage crops such as alfalfa, clovers, and grasses. Grasshopper populations increase during seasons which are hot and dry. During such years, it is important to examine breeding areas early to detect the young insects. Control measures are more effective and economical when directed at immature grasshoppers. Following years of high numbers of grasshoppers there is usually a buildup of blister beetles: its larvae feed on grasshopper eggs. The adults are foliage feeders and may become economic pests of alfalfa and clover.

6. **GREEN CLOVERWORM,** *Plathypena scabra* (Fabr.). Occasionally outbreaks of these slender, shiny, light green caterpillars will cause damage to alfalfa and clovers. They are very active and usually wriggle rapidly when disturbed. They are frequently heavily parasitized; the picture shows two eggs of a parasitic fly attached just behind the head. There are other caterpillars which may also be found in forage legumes. One of the most common is the alfalfa caterpillar. This is a darker, velvety green caterpillar which is the larva of the common yellow alfalfa butterfly.

7. **POTATO LEAFHOPPER,** *Empoasca fabae* (Harris). This is one of the most important insect pests of forage alfalfa in Minnesota. The adults, which fly into the state from the south, are very small, about ⅛-inch long, and light green. Adults and the young, or nymphs, are sap-sucking insects. Their feeding causes stunting of the plants and yellowing or reddening of the foliage. Infestations not only cause yield reduction, but also lower protein and vitamin A content of the forage. In most seasons the most severe damage is done to the second crop of alfalfa.

8. **MEADOW SPITTLEBUG,** *Philaenus spumarius* (L). The most characteristic symptom of spittlebug infestations is the frothy spittle secreted by the yellowish green nymphs as they feed. Heavy infestations cause stunting, shortened internodes and reduced yield of the first crop in the spring. In Minnesota, infestations occur mainly in the southeast corner of the state.

9. **SPOTTED ALFALFA APHID,** *Therioaphis maculata* (Buckton). This aphid has not been found frequently in Minnesota. However, it is potentially a very serious pest to alfalfa. Unlike the pea aphid, the spotted alfalfa aphid causes severe stunting and yellowing of the plants and may kill seedlings. It is a small aphid, light yellowish green in color with rows of dark spots on the back and sides. It apparently prefers warm dry conditions. It secretes sweet, sticky honeydew which may be quite noticeable in heavily infested fields.

10. **PEA APHID,** *Acyrthosiphon pisum* (Harris). This is the common, large, bright green aphid found in alfalfa and other legumes each year. In some seasons populations build up to such extremely large numbers that the stems and terminal buds are covered with masses of the aphids. Alfalfa seems to be able to tolerate large numbers of pea aphids if moisture is adequate. During dry periods, however, heavy infestations may cause wilting, stunting, and yellowing. Aphids develop in larger numbers, however, in cool, wet seasons. Under dry conditions natural controls usually reduce the infestations, especially after the first crop is harvested.

Current Control Information

The information and color illustrations presented here are designed to help you correctly identify some of the more common insects that attack forage legumes. These insects and the problems they cause do not change, but methods of dealing with them do. Contact your local county agent or state extension entomologists for current methods of control.

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